

## **REMARKS**

### ***Summary of the Amendment***

Upon entry of the above Amendment, Claims 1 and 13 will have been amended. Accordingly, Claims 1-20 remain currently pending.

### ***Summary of the Office Action***

In the subject Office Action, Claims 13 and 16-20 are rejected under 35 U.S.C. §102(e) as being anticipated; and Claims 1-12 and 14-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over the art of record.

### ***Traversal of Rejection under 35 U.S.C. §102(e)***

Applicant respectfully traverses the rejection of Claims 13 and 16-20 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,757,178 to Okabe et al. [hereinafter "OKABE"].

Regarding Claim 13, the Examiner contends that OKABE discloses a substrate for integration into a semiconductor package in Figure 3, the substrate comprising: a non-conductive film 21-23 (column 4, line 55) defining opposed top and bottom surfaces and including a plurality of vias 30, 31a-b, 32a-b, 33a-c (column 4, line 64) disposed therein; a plurality of upper leads 15a-c (column 5, line 32) disposed on the top film surface adjacent respective ones of the vias; a plurality of lower leads 16a-c (column 4, line 52) disposed on the bottom film surface adjacent respective ones of the vias, each of the lower leads 16a-c being electrically connected to a respective one of the upper leads 15a-c; and at least one transmission line element 51 (column 5, line 33) disposed on the top film surface and electronically connected to at least one of the upper leads.

### **A Review of OKABE**

OKABE discloses a multilayer circuit board 21-23 on which a semiconductor chip 40 is mounted and which includes a thin film capacitor 52 disposed thereon. A first electrode of

the thin film capacitor 52 and a first wiring conductor of the multilayer circuit board 21-23 are electrically connected to each other, with a second electrode 13a of the thin film capacitor 52 and a second wiring conductor of the multilayer circuit board 21-23 being electrically connected to each other as well. The employment of the multilayer circuit board 21-23 makes it possible to provide the electronic circuit equipment using the multilayer circuit board 21-23 that includes the built-in film capacitor having the dielectric-constant thin film dielectric 20.

*In re Independent Claim 13 (and Dependent Claims 16-20)*

As amended, Applicant's independent Claim 13 recites, *inter alia*, . . . a *single* non-conductive film layer . . . Applicant submits that OKABE fails to disclose at least the above-noted feature.

In particular, it is noted that the OKABE electronic circuit equipment utilizes three different dielectric layers 21, 22, 23. Nor do the teachings of OKABE support any hypothetical modification of the electronic circuit equipment to eliminate one of the three specifically described dielectric layers 21, 22, 23 of the multi-layer circuit board. On the other hand, the present invention only utilizes a *single* non-conductive film layer.

Because OKABE fails to disclose at least the above-noted features of the present invention, Applicant submits that OKABE fails to disclose each and every recited feature of the present invention, and that the Examiner has failed to establish an adequate evidentiary basis to support a rejection of anticipation under 35 U.S.C. §102(b). Therefore, Applicant submits that the Examiner's rejection of independent Claim 13 has now been overcome and should be withdrawn.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of independent Claim 13 under 35 U.S.C. §102(e) and indicate that this claim is allowable over the art of record.

Further, Applicant submits that Claims 16-20 are allowable at least for the reason that these claims depend from allowable independent Claim 13 and recite additional features that further define the present invention.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependent Claims 16-20 under 35 U.S.C. §102(e) and indicate that these claims are allowable over the art of record.

***Traversal of Rejection under 35 U.S.C. §103(a)***

**OKABE in view of AUBURGER**

Applicant respectfully traverses the rejection of Claims 1-2 and 7-12 under 35 U.S.C. §103(a) as being unpatentable over OKABE in view of U.S. Patent No. 6,867,492 to Auburger et al. [hereinafter “AUBURGER”].

Regarding Claim 1, the Examiner submits that OKABE discloses a semiconductor package in Figure 1 comprising: a non-conductive film 21/22/23 (column 4, lines 55, 62 and 64) defining opposed top and bottom film surfaces and including a plurality of vias 30, column 5, line 36, disposed therein; a plurality of upper leads 15c/50 column 4, line 65 (column 5, line 42) disposed on the top film surface adjacent respective ones of the vias; a plurality of lower leads 16c (column 5, line 38) disposed on the bottom film surface adjacent respective ones of the vias, each of the lower leads 16c being electrically connected to a respective one of the upper lead 15c; at least one transmission line element 51 (column 5, line 33) disposed on the top film surface and electrically connected to at least one of the upper leads 15c (Figure 1 or Figure 2B); and at least one semiconductor die 40 (column 5, line 1) attached to the top film surface and electrically connected to at least one of the upper leads 15c and the transmission line element 51.

However, the Examiner admits that OKABE does not disclose a semiconductor package comprising a package body at least partially covering the semiconductor die, the upper leads, the transmission line element and the top film surface. The Examiner then submits that AUBURGER discloses a semiconductor package in Figure 4 comprising a package body 35 (column 9, line 66) at least partially covering the semiconductor die 1 (column 7, line 67), the upper leads 7 (column 8, line 45), and the transmission line element 25/26 or 32 (column 9, lines 28, 47 and column 10 line 65). The Examiner submits that at the time the invention was made, it would have been obvious to one of ordinary skill in the

art to use the package body teaching of AUBURGER with OKABE's device because it would have provided the protection of the semiconductor package as taught by AUBURGER (column 14, lines 48-52).

*In re Independent Claim 1 (and Dependent Claims 2 and 7-12)*

As amended, Applicant's independent Claim 1 recites, *inter alia*, . . . a *single* non-conductive film layer . . . Applicant submits that even assuming *arguendo* that the Examiner's combination is proper, the aforementioned invention still does not result.

In particular, OKABE does not teach or suggest a semiconductor package having only a *single* non-conductive film layer. Rather, it is noted that the OKABE electronic circuit equipment utilizes three different dielectric layers 21, 22, 23. Nor do the teachings of OKABE support any hypothetical modification of the electronic circuit equipment to eliminate one of the three specifically described dielectric layers 21, 22, 23 of the multi-layer circuit board. On the other hand, the present invention only utilizes a *single* non-conductive film layer. AUBURGER itself does not provide a teaching or suggestion which overcomes the deficiencies of OKABE.

Accordingly, Applicant submits that no proper combination of OKABE and AUBURGER teaches or suggests at least the above-noted features of the present invention, and thus the rejection of at least independent Claim 1 under 35 U.S.C. § 103(a) has been overcome and should be withdrawn.

Further, Applicant submits that Claims 2 and 7-12 are allowable at least for the reason that these claims depend from allowable independent Claim 1 and recite additional features that further define the present invention.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependent Claims 2 and 7-12 under 35 U.S.C. §103(a) and indicate that these claims are allowable over the art of record.

OKABE in View of AUBURGER and further in view of CHOU

Applicant respectfully traverses the rejection of Claims 3, 5-6 and 14 under 35 U.S.C. §103(a) as being unpatentable over OKABE and AUBURGER as applied to Claim 1 above, and further in view of U.S. Patent Publication No. 2002/0140081 to Chou et al. [hereinafter "CHOU"].

Regarding Claims 3, 5 and 14, the Examiner submits that OKABE discloses a semiconductor package wherein the transmission line elements are selected from the group consisting of: an inductor, and wherein the semiconductor die 40 is electrically connected to the upper lead 50 and to the transmission line element by respective ones of a plurality of bond wires 41b (column 5, line 34). However, the Examiner admits that OKABE does not disclose a semiconductor package wherein the transmission line elements are selected from the group consisting of a short wave coupler; a balun; a filter; and combinations thereof, and wherein the bond wires are covered by the package body. The Examiner then submits that CHOU discloses a semiconductor package wherein the transmission line elements (passive elements) are selected from the group consisting of a short wave coupler; a balun; a filter; and combinations thereof. The Examiner then submits that at the time the invention was made, it would have been obvious to one of ordinary skill in the art to use the passive elements teaching of CHOU with OKABE and AUBURGER's device because those passive devices would have been typical structure in the modern communication system as taught by CHOU.

Dependent Claims 3, 5-6 and 14

As already discussed, Applicant's independent Claims 1 and 13 as amended recite, *inter alia*, . . . a **single** non-conductive film layer . . . Applicant submits that even assuming *arguendo* that the Examiner's combination is proper, the aforementioned invention still does not result. In this regard, CHOU does not provide any teaching or suggestion which overcomes the deficiencies of OKABE. Rather, CHOU teaches a highly integrated *multi-layer* circuit module.

Thus, Applicant submits that no proper combination of OKABE, AUBURGER and CHOU teaches or suggests at least the above-noted features of the present invention, and that the rejection of at least independent Claim 1 and 13 under 35 U.S.C. § 103(a) should be withdrawn. Accordingly, Applicant submits that Claims 3, 5-6 and 14 are allowable at least for the reason that these claims depend from respective ones of allowable independent Claim 1 and 13 and recite additional features that further define the present invention.

In view of the foregoing, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependent Claims 3, 5-6 and 14 under 35 U.S.C. §103(a) and indicate that these claims are allowable over the art of record.

OKABE in View of AUBURGER and further in view of SUGIHARA

Applicant respectfully traverses the rejection of Claims 4 and 15 under 35 U.S.C. §103(a) as being unpatentable over OKABE and AUBURGER as applied to Claim 1 above, and further in view of U.S. Patent Publication No. 2003/0020502 to Sugihara et al. [hereinafter "SUGIHARA"] .

Regarding Claims 4 and 15, the Examiner submits that OKABE discloses the semiconductor package, the lower leads 16c and upper lead 15c and the transmission line 50 element each including copper and gold (column 6, lines 1-4). However, the Examiner admits that OKABE does not disclose a semiconductor package wherein the lower lead and the upper lead and the transmission line element each include nickel/gold. The Examiner submits that SUGIHARA discloses a conductive line on the polyimide substrate in Figure 8 (A-G) comprising a Cu/Ni/Au. The Examiner then submits that at the time the invention was made, it would have been obvious to one of ordinary skill in the art to use the Cu/Ni/Au conductive line teaching of SUGIHARA with OKABE's conductive line, because it would have prevented reflection from the terminal of the electrical transmission line as taught by SUGIHARA.

Dependent Claims 4 and 15

As already discussed, Applicant's independent Claims 1 and 13 as amended recite, *inter alia*, . . . a *single* non-conductive film layer . . . Applicant submits that even

assuming *arguendo* that the Examiner's combination is proper, the aforementioned invention still does not result. In this regard, SUGIHARA does not provide any teaching or suggestion which overcomes the deficiencies of OKABE.

Thus, Applicant submits that no proper combination of OKABE, AUBURGER and SUGIHARA teaches or suggests at least the above-noted features of the present invention, and that the rejection of at least independent Claim 1 and 13 under 35 U.S.C. § 103(a) should be withdrawn. Accordingly, Applicant submits that Claims 4 and 15 are allowable at least for the reason that these claims depend from respective ones of allowable independent Claims 1 and 13 and recite additional features that further define the present invention.

In view of the foregoing, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of dependent Claims 4 and 15 under 35 U.S.C. §103(a) and indicate that these claims are allowable over the art of record.

***Application is Allowable***

Applicant respectfully submits that each pending claim of the present application meets the requirements for patentability, and therefore requests that the Examiner indicate the allowance of such claims.

CONCLUSION

In view of the foregoing, it is submitted, that none of the references of record, when considered either alone or in any proper combination thereof, anticipate or render obvious Applicant's invention as recited in Claims 1-20. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

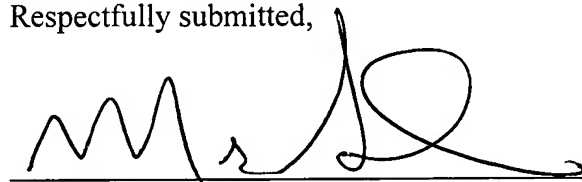
Applicant respectfully submits that each pending claim of the present invention meets the requirements for patentability under 35 U.S.C §§ 102 and 103. Accordingly, allowance of the present application and all the claims therein is respectfully requested and believed to be appropriate. Further, any amendments to the claims which have been made in this response and which have not been noted to overcome a rejection based upon the prior art should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

If any additional fee is required, please charge Deposit Account Number 19-4330.

Respectfully submitted,

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